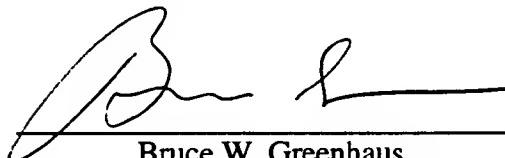


The Examiner is invited to call the undersigned attorney if a telephone call could help solve any remaining items.

Dated: May 6, 2002

Respectfully submitted,

By:

  
Bruce W. Greenhaus  
Registration No. 37,339  
(858) 651-6399

QUALCOMM Incorporated  
Attn: Patent Department  
5775 Morehouse Drive  
San Diego, California 92121-1714  
Telephone: (858) 651-1179  
Facsimile: (858) 658-2502



COPY OF PAPER  
ORIGINALLY FILED

VERSION WITH MARKINGS TO SHOW CHANGES MADE

RECEIVED

MAY 23 2002

Technology Center 2600

[ [1010] Fig. 1 is a block diagram showing one sector of a basic conventional cellular system.

[1011] Fig. 2 is a diagram of a cellular telephone system utilizing a smart antenna system.

[1012] Fig. 3 is a diagram showing the propagation components of the electro-magnetic field between one subscriber unit and the base station.

[1013] Fig. 4 is a block diagram of an illustrative implementation of a mobile unit in accordance with the present teachings.

[1014] Fig. 5 is a block diagram of an illustrative implementation of a base station in accordance with the teachings of the present invention.

[1015] Fig. 6 is a block diagram of an illustrative embodiment of a smart antenna system incorporating the teachings of the present invention.

[1016] Fig. 7 is a flow diagram of a beamforming algorithm implemented in accordance with conventional teachings based on a Minimum Mean Squared Error Algorithm.

[1017] Fig. 8 is a flow diagram illustrative of the spatial processing method utilized by the method for directing narrow beams of the present invention.

[1018] Fig. 9 is a flow diagram of an illustrative algorithm used to provide beamforming to a user reporting his position in accordance with the teachings of the present invention.]

-- [1011] Fig. 1 is a flow diagram of one such beamforming algorithm implemented in accordance with a conventional Minimum Mean Squared Error Algorithm.

[1012] Fig. 2A is a block diagram showing one sector of a basic conventional cellular system.

[1013] Fig. 2B is a diagram of a cellular telephone system utilizing a smart antenna system.

[1014] Fig. 3 is a block diagram of a mobile unit in accordance with the present teachings.

[1015] Fig. 4 is a simplified block diagram of a base station in accordance with the presently disclosed method and apparatus, a public switched telephone network (PSTN), and a switch.

[1016] Fig. 5 is a simplified block diagram of the smart antenna processor.

[1017] Fig. 6 is a flow diagram of an algorithm used to form beams.

[1018] Fig. 7 is a flow diagram of a spatial processing method. --